

***Interactive comment on “Influence of
Hydrometeorological Hazards and Sea Coast
Morphodynamics onto Unique Coastal Vegetation
Sites Development – *Cephalanthero rubrae* –
Fagetum on Wolin Island (the Southern Baltic
Sea)” by Jacek Tylkowski et al.***

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- in the Methods section, formulas for climate indicators will be added and threshold values for *Fagus Silvatica* will be described. De Martonne Aridity Index: $IA=P/(T+10)$ (De Martonne 1926), where P the amount of the annual precipitation, T average annual temperature. $IA<30$ = silvosteppe, $30<IA<45$ climate favourable for the forest, with an optimal for beech in the range 35-40 (Satmari, 2010). De Martonne Aridity Index

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- classification Tabari et al., 2014: $IA < 5$ extremely arid $5 < IA < 10$ arid $10 < IA < 20$ semi-arid $20 < IA < 24$ mediterranean $24 < IA < 28$ semi-humid $28 < IA < 35$ humid $35 < IA < 55$ very humid $55 < IA$ extremely humid. Ellenberg Quotient Index: $EQ = Tw/P \times 1000$ (Ellenberg 1988) where T_w represents the temperature of the warmest month of the year, P annual precipitations (Stojanovic et al., 2013). Ellenberg (1988) has set a threshold of beech favourability for EQ values lower than 30, and at EQ values that are higher than 40, the beech disappearance occurs. Forestry Aridity Index: $FAI = 100 \times (TV_{VII-VIII} / (PV_{VII-VIII} + TV_{VII-VIII}))$ where $TV_{VII-VIII}$ is the average temperature of the months July and August, $PV_{VII-VIII}$ represents the amount of precipitations during May-July and $TV_{VII-VIII}$ is the amount of precipitations during July-August (Führer et al. 2011). Mayr Tetratherm Index: $MT = (TV + TVI + TV_{VII} + TV_{VIII}) / 4$ where $tV - t_{VIII}$ represent the mean temperature for the May-August period. - A sentence will be completed in the summary (a few words in bracket in line 20-21): It has been established that in the 21st century, a relatively larger hazard to the functioning of the researched site are climate changes (ie mostly changes in thermal conditions and precipitation conditions) not the sea coast erosion.

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